

Appl. No. 09/982,271
Amdt. Dated September 14, 2005
Reply to Office Action of 8/14/05

Docket No. CM01968G
Customer No. 22917

REMARKS/ARGUMENTS

Applicants have amended Claims 1-3, 5, 9 and 15, cancelled Claim 14 and added Claim 17. Claims 1-13 and 15-17 remain pending in this application, and Applicants respectfully request reconsideration of these pending claims in view of the above amendments and these remarks.

The Examiner objected to Claims 2 and 15 because of the following informalities: missing word "and" after phrase: Fast Walsh Transforms". Appropriate correction is required. Applicants request that the Examiner remove these objections based on Applicants amendments to Claims 2 and 15, which adds the word "and" to each of Claims 2 and 15 as suggested by the Examiner.

The Examiner has rejected Claims 1-15 under 35 U.S.C. 102(b) as being anticipated by Popovic (USPN 6,091,761). Applicants have cancelled Claim 14, thereby rendering moot the Examiner's rejection of this claim. Applicants traverse the remaining rejections. Applicants respectfully submit that Popovic fails to disclose all of the elements recited in amended Claims 1 and 9 and included by dependency in Claims 2-8 and 10-13 and 15.

Amended Claim 1 recites "receiving a composite signal sequence, comprising transmissions from a plurality of source devices" (emphasis added), and amended Claim 9 recites "a receiver for receiving elements of a composite signal sequence comprising transmissions from a plurality of source devices" (emphasis added). Popovic does not disclose these limitations but instead discloses a receiver that uses "Orthogonal Gold Codes" "for disspreading of a received signal" "from a single user." (See Abstract; col. 1, lines 11-17, 4454 and 62-63, "Multicode transmission scheme is a method to provide high-rate and variable-rate data services in DS-CDMA systems. . . In such a scheme several code channels are assigned to a single user. High-rate data stream is split into a number of parallel low-rate streams. These low-rate streams are spread by different sequences and added together before power amplification.

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To avoid interference between different code channels of *a single user*, all spreading sequences (codes) should be orthogonal within data symbol duration. . . An example of orthogonal sequences is a so-called Orthogonal Gold sequences.”).

In addition, Popovic fails to disclose the limitations recited in amended Claim 1 and included by dependency in Claims 2-8 of “generating a re-ordered composite signal sequence. . . by *directly* applying a reordering function to the received composite signal sequence; and *directly* performing a transform on the reordered composite signal sequence” (emphasis added). Likewise, Popovic fails to disclose the limitations recited in amended Claim 9 and included by dependency in Claims 10-13 and 15 of “a state generator for generating a sequence of addresses . . . corresponding to a reordered composite signal sequence by *directly* applying a reordering function to the composite signal sequence; . . . and a processor . . . for *directly* performing a transform on at least a portion of the elements of the reordered composite signal sequence” (emphasis added).

Instead, in one embodiment Popovic discloses “multiplying element-by-element said [received] signal sequence, . . . with said arbitrary sequence . . . in order to obtain a set of products. . . [and] permuting [i.e., re-ordering] said set of products. . .” (Claim 1, *see also* col. 6, lines 1-14). Thus, in this embodiment the receiver in Popovic doesn’t apply the reordering function *directly* to a received composite signal, the reordering function is applied to a single user signal (but not even directly) because an extra multiplying step is required in Popovic before the reordering step, which results in the reordering step in Popovic being applied to a set of products that are derived from the received single user signal. Moreover, in this embodiment since Popovic does not *directly* perform a transform on the reordered composite signal sequence, it performs a transform on a set of products as indicated above.

In a second embodiment described by reference to FIG. 5, Popovic discloses generating a re-ordered signal by applying a re-ordering function to the received *single user* signal (as opposed to the received composite signal recited in Claims 1 and 9). Popovic further discloses in this second embodiment an *additional* step of multiplying the re-ordered single user signal by a

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permuted version of the stated arbitrary sequence. Thus, Popovic does not *directly* perform a transform on the re-ordered composite [multi-user] signal sequence as is recited in Claims 1 and 9.

For all of the above reasons, Applicants submit that amended Claims 1 and 9 and dependent Claims 2-8, 10-13, 15 and 17 are now in a condition for allowance. Moreover, with respect to new Claim 17, since Popovic teaches using only *Orthogonal* Gold Codes, this reference fails to disclose "wherein the received composite signal sequence comprises only quasi-orthogonal [non-orthogonal] sequences" as recited in Claim 17.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Popovic (USPN 6,091,761). Applicants submit that Popovic does not render Claim 16 obvious because, for the reasons argued above, this reference fails to teach or suggest all of the limitations recited in amended Claim 9 and included by dependency in Claim 16. Therefore, Claim 16 is also in a condition for allowance.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants.

In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicant's attorney or agent at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection.

Please charge any fees that may be due to Deposit Account 502117, Motorola, Inc.

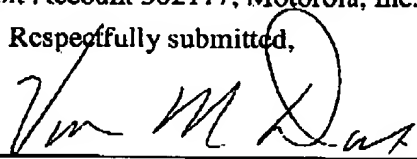
SEND CORRESPONDENCE TO:

Motorola, Inc.
1303 East Algonquin Road
IL01/3rd Floor
Schaumburg, IL 60196
Customer Number: 22917

Attachments

Respectfully submitted,

By:


Valcrist M. Davis
Attorney of Record
Reg. No.: 50,203

Telephone: 847-576-6733
Fax No.: 847-576-0721